

# W5YI

National Volunteer Examiner Coordinator

## REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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August 15, 1989

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## CHANGING OF THE GUARD AT FCC: The End of an Era

*"The amateur radio service has never had any problem staying high on the agenda at this commission. Even those of us who are great proponents of markets, understand that there are some values that will not necessarily be accommodated by a free market... What these [amateur radio and public safety] services have to do is come to the commission and try to make the case that they cannot be thrown to the market forces, that the commission has to somehow accommodate their needs and interests. Now we will look at such requests with some skepticism. Regulated parties always want the FCC to give them stuff, like spectrum, for free, rather than have to go and buy it. The idea is you rely generally on markets, and you carefully identify those cut-outs which will not be accommodated by the market, and then you provide for them." - Outgoing FCC chairman Dennis Patrick, in his last press conference*

*"I am aware of the concern expressed by the amateur community over the FCC's [220 MHz] decision... Since the amateur community provides valuable public services, particularly in times of emergency, this decision must have been an especially difficult one to make. NTIA, in consultation with the Interdepartment Radio Advisory Committee, supported the Commission's proposal to reallocate the 220-222 MHz band to the land mobile service. It was NTIA's view that this reallocation would facilitate the development of narrowband technologies and would provide additional spectrum resources to support commercial operations. I am aware of no reason to think that the Commission decision was erroneous." - Incoming FCC chairman-designate Alfred Sikes, in his first official statement before the Senate Commerce Committee*

On Wednesday, August 2, Dennis Patrick said his farewells and exited the FCC after serving the agency for the last six years ...four as its chairman. As the commission's chief spokesman and pacesetter, Patrick delighted the broadcast industry with his aggressive deregulatory policies and agitated consumer groups by changing the economics of telephone service.

He granted frequency coordination monopolies to powerful trade associations, and then reversed the policy after bitter protests from mobile radio dealers. He supervised the reallocation of amateur spectrum, the rewrite of \$Part 97 and the establishment of new ham bands.

Patrick's successor, Alfred Sikes of Missouri,

may well be confirmed by the full Senate by the time you read this. Sikes, a former broadcaster and administrator of the *National Telecommunications and Information Administration*, endured a grueling four-hour confirmation hearing in the Senate on July 31. At the hearing, Democratic senators repeatedly coaxed Sikes and fellow nominees Sherrie Marshall and Andrew Barrett to distance themselves from the policies of the Patrick FCC. They generally refused to do so, but won the Commerce committee vote anyway.

Although Sikes addressed Amateur Radio in his prepared statment (see above), the key topic of the hearing was sex and violence on radio and television -- and what, if anything, the three commissioners-to-be were going to do about it.

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## HEARING BEFORE COMMERCE COMMITTEE

Nominee Andrew Barrett noted that sex and violence are on TV and radio because "there is a market for it. We always have to keep that in mind."

Barrett's statement infuriated members of the committee. Sen. Al Gore (D-TN) launched the most intense oration of the hearing. He recounted a recent broadcast of a tape containing sounds of the murder of a mother and daughter. According to Gore, it was broadcast as entertainment. He noted that the FCC has the power to destroy unauthorized stations: "If somebody else tries to broadcast on the frequency used by that businessman, you will, if necessary, dynamite the tower. And there's a market for what that broadcaster's putting on. It's becoming more and more common because there's a market for it. ...I'm not saying this for effect of news coverage. I'm telling you straight from my heart as the parent of four children: I'm sick and tired of it, and I believe that parents all across this country are tired of it. They know that there's a way to [regulate broadcasting] that's consistent with our values and traditions...

"The American people want to see a FCC that enforces the law and the public interest standard. Children are part of the public. And whether it's explicit or violent, you can attract their attention and get more of the market because there's a market for it. Is it going to be more of the same or not?" Gore demanded.

Sikes replied that as the owner of a rock radio station, he instructed his manager to remove "vulgar lyrics" from the station's programming. He said he declined to subscribe to MTV or HBO cable channels because he didn't want to expose his teenage daughters to the channels. He endorsed FCC action to stop programs if they are "obscene" but not if they are "indecent", preferring that broadcasters voluntarily discontinue indecent material. He did not address the programming of violence such as the murder tape. Sikes said that Supreme Court decisions preempt much broadcast content regulation.

Gore disagreed: "It's not all the Supreme Court. The FCC has a lot of power, a lot of latitude, a lot of jurisdiction. Your predecessor decided not to exercise that jurisdiction because

there's a market for indecency and explicitness. And because broadcasters have a right to make as much money as they can doing it, and if the public doesn't like it they can watch Nintendo instead."

Barrett said he thought that anyone using the public airwaves has a higher responsibility, but he didn't know what standards the FCC had for programs. Marshall believed that the FCC should find some way to regulate "parts of this area" but that the courts keep striking down such regulations.

One senator claimed that recent Federal court decisions do affirm the FCC's power to enforce rules against indecency, and in fact they allow the FCC to fight "broader" programming that goes beyond the narrow definition of obscenity. He noted that the current FCC chose not to use that power. He asked each nominee if they would enforce these rules. Each one said, simply, "Yes."

Sen. Bob Packwood (R-OR) suggested that the advance of technology has eliminated the need for FCC regulation in many cases. On the other hand, committee chairman Ernest Hollings (D-SC) said that technology created the need for regulation. "The technology [of broadcasting] was so abundant that the industry pleaded for regulation -- there was jamming, interference, no one could hear anybody else.

"We had to bring order out of chaos, and that created the *Communications Act of 1934*. So we have the rules, regulations and the laws against obscene broadcasts. But that ragamuffin commission that preceded you said, 'Oh well, you can get obscene from midnight to four in the morning.' Garbage is garbage regardless of time of day. So Congress passed legislation to forbid obscenity over the 24-hour period."

Hollings said the FCC's policies of "deregulate, deregulate, deregulate" are destroying legitimate broadcasters, discouraging minority ownership of stations and reducing the quality of programming for children.

The hearing was followed by a panel of ministers and an attorney from religious and "pro-family" organizations. The current FCC and the three nominees did not fare well before these groups. The *Religious Roundtable* said that when

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leaders learn of the "years of misdirection of the FCC under [previous chairmen] Mark Fowler and Dennis Patrick...they will react in moral outrage." Sikes was seen by several of the groups, and by members of the Commerce committee, as a continuation of the Fowler/Patrick chairmanship.

The *Family Research Council* said it is "frankly upset that the nominees for the FCC vacancies were chosen with absolutely no regard for our concerns. Our interest in the FCC issue was well known, yet we were completely excluded from the process. We were not even afforded the courtesy of an explanation...It cannot escape our notice that the members of this committee have been more hospitable to our concerns than the administration that was put in place by the votes of our constituents."

Most of the groups asked the committee to reject the nomination of Sikes for FCC chairman. The efforts failed; the Commerce committee voted to confirm all three nominees. If the hearing witnesses were opposed to the current FCC, at least Patrick had friends among his fellow commissioners and staff.

## GOING AWAY PARTY FOR PATRICK

FCC staff hosted a going-away party for Patrick, which featured a humorous videotape "roast" of the chairman and his career at the FCC. The program made fun of his high school report cards, his trademark California hairstyle and his enthusiasm for surfing and rock music.

TV celebrities appearing on the video included Night Court's Harry Anderson, who instructed Patrick in how to use the gavel as a macho symbol; Entertainment Tonight's Mary Hart, who urged Patrick to replace co-host John Tesh and to tell her "all about cellular telephones," and Pat Sajak of Wheel of Fortune.

Sajak claimed responsibility for thinking up most of the important objectives of the FCC. He revealed that Patrick's only accomplishments were "getting free cable TV for commissioners, and appointing a blue ribbon committee to investigate why the little dot in the middle of the TV screen stays on after you turn off the set."

Much was made of Patrick's often rocky relationship with a Congress upset over the FCC's

broadcast, telephone and spectrum policies. In one skit, an angry Congress cuts the FCC's electric power, forcing the commissioners to have meetings by candlelight. The announcement of Patrick's resignation inspires Congress to turn the lights back on.

## NEWS FROM PROJECT DOVE

### *Digital Orbiting Voice Encoder*

Thanks to DOVE education director **Richard C. Ensign/N8IWJ** we have the latest on the preparations for the Nov. 10 launch of the DOVE Microsat.

**Bob McGwier/N4HY** is designing the satellite's speech software and components. After overcoming some initial problems in the circuit design using the Votrax SC-02 speech chip, DOVE first spoke on July 12.

In addition to telemetry, packet data and bulletins, DOVE will retransmit digitized messages of peace from children around the world. This is called *Language Arts Project (LAP) 1*. The messages are uploaded by command stations. N4HY reports that digitizing children's voices presents some problems. There are high frequency components in kids' voices that the digitizing process might not catch. To make the speech clearer, sampling rates may be increased. This means that more data must be uploaded by ground stations into the satellite for a given talk time. With only 5-7 minutes of good upload time per pass, command stations will be very busy uploading LAP 1 messages. To reduce pressure on the stations, AMSAT decided to have DOVE speak one, or at most two, messages per week.

The deadline for schools to submit LAP 1 messages has been extended to the launch date: Nov. 10, 1989. Unfortunately, some schools are sending tapes that do not meet criteria. Via packet, contact N8IWJ @ WA8OOJ (Livonia MI) or via mail at 421 N. Military, Dearborn, MI 48124 for information.

Remaining tasks include populating flight circuit boards with components, spacecraft integration and vacuum chamber testing to simulate launch and space conditions. With all tests passed, DOVE and its companion Microsats will be transferred to the South American Atlantic coast for launch from Kourou, French Guiana.

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DOVE will transmit on 145.825 MHz (changed from previous frequency) with an ID-Bulletin-Telemetry-Packet sequence. The ID will be in FM voice speaking the time, altitude and coordinates of the satellite. Voice bulletins will include QSL address, tracking information and LAP 1 message. Telemetry may include parameters such as temperature and battery status. Unlike other satellites which required decoding and application of formulas, DOVE will speak these readings in real time in their actual values ("Battery 11.6 volts."). Finally, a 30 second or so packet transmission may include specific school bulletins and more detailed telemetry.

N8IWJ can provide an excellent school administrator's letter that explains DOVE and its many applications in the educational environment. It's a good "foot-in-the-door" for hams who want to help out the program in their local areas. To date, schools in 42 states and 17 foreign countries have gotten involved.

## **PART 97 REWRITE: PETITIONS COMING IN**

Amateurs, the press and the ARRL are asking the FCC to reexamine the new Part 97 rules released in June. The *Radio-Television News Directors Assn. (RTNDA)* was joined by ABC, CBS, NBC, NPR [National Public Radio], the National Assn. of Broadcasters, American Society of Newspaper Editors and the Reporters Committee for Freedom of the Press in a petition to make it easier for reporters to use amateur stations for newsgathering purposes.

New rule 97.113(c) allows an amateur station to transmit communications to convey news information about an event for dissemination to the public if:

- the information involves the immediate safety of life or protection of property;
- the information is directly related to the event;
- the information cannot be transmitted by other means because of disruption or unavailability of communication systems at the origination point;
- and other means of communication could not be reasonably provided before or at the time of the event.

The news media organizations say the "essential reform needed" is the elimination of the requirement that the information involve the "im-

mediate" safety of life or protection of property. The media said that the requirement "effectively prohibit[s] news coverage which the Commission should encourage, such as information on the aftermath of a hurricane or tornado, or of an airplane crash. In such a case, there may no longer be an immediate threat to life or property, but there still is an absence of other communication means to report the devastation and/or loss of life."

The media proposed a substitute rule that made no reference to immediacy or safety of life or property. It would have allowed amateur stations to be used for transmitting information "directly related to an important news event." The FCC's position in the Part 97 rewrite was that "Communications for journalists will be permitted only in extraordinary circumstances."

The ARRL filed a "request for issuance of errata list", urging the FCC to examine rules that may have been unintentionally changed; that contain typographical errors; or where needed information was left out.

## **Among the areas of concern to ARRL:**

**Digipeaters.** For example, ARRL wanted the FCC to include "digipeater" as a separate definition, to distinguish it from repeater (although a digipeater -- used to repeat data transmissions -- is a type of repeater). The League found several places in the new rules that appear to forbid or inhibit digipeaters.

**Morse definition.** ARRL said that the FCC's definition of CW and MCW prohibits using variations of the Morse code other than the International Morse code. The League pointed out that some hams use American Morse or versions of Morse that include foreign language characters.

**Clubs.** Rule 97.5(c)(2) allows a club to be comprised of at least two persons in order to hold a club station license. ARRL suggested that four persons be the minimum. "Should new club station licenses be issued once again, which the League favors, the present language appears to invite applications from parties wishing special call signs which are not bona fide clubs."

**Typographical errors.** ARRL found numerous typos in the new rules; for example, one error excluded the 17M band from the *Amateur Satellite Service*.

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**Automatic control.** ARRL said that rule 97.109 prohibits digipeaters, although 97.109(d) permits automatic control of stations retransmitting third-party traffic using AX.25 protocol on 6M and higher bands.

**W1AW Rule.** Rule 97.113(b)(2) permits the control operator of a club station to be paid while transmitting code practice or bulletins if the station meets certain tough criteria. These include a schedule of at least 40 hours of transmissions per week; 30-day advance publication of the transmissions; and operations on all amateur MF and HF bands using reasonable measures to maximize coverage. ARRL said the requirement to transmit on all MF and HF amateur bands is "neither practical nor necessary. Previous rules required transmission on only six bands." The League noted that W1AW is engineered to transmit on six MF and HF bands.

**Karl Pagel/N6BVU**, wants the FCC to include a footnote notation in the rules that recognizes that the Amateur, Fixed and Mobile Services are the primary users of the 216-225 MHz band after January 1, 1990. Pagel quotes WARC-79 international footnote 627 which states the government radiolocation service becomes the secondary user of the band in ITU Region 2 after Jan. 1. His petition is not related to the recent re-allocation of 220-222 MHz to the Land Mobile Service.

## **PEACE AT LAST IN DAT BATTLE**

Digital Audio Tape (DAT) may finally invade U.S. shores in big numbers, thanks to a resolution of the long-running dispute between electronics manufacturers and the record industry.

DAT uses tiny audiocassettes and sampling techniques to record as well as play back in compact-disc quality sound. Because the recordings are of binary data and not analog voltage fluctuations, they are "perfect" reproductions. The record industry, fearful that "pirates" would sell perfect DAT copies of CDs, threatened to sue DAT manufacturers for copyright infringement on behalf of music artists.

Actually, DAT machines have been available in the U.S. for years, but only through two sales channels: the "grey market" of DAT products intended only for overseas sale, and the professional broadcast equipment market. Wide-

scale consumer DAT has been thwarted by the threat of lawsuits, so music titles in DAT form have been almost impossible to get. The new agreement between the Electronic Industries Assn. and the Recording Industry Assn. of America works this way:

The DAT technology would be designed to allow consumers to make perfect DAT copies of CDs, pre-recorded DAT tapes and digital broadcasts -- but not copies of the copies. Each copy would have to be made from an original. Music recorded on DAT from conventional analog records and tapes would produce up to two generations of DAT copies but no third-generation copies.

Musicians are complaining about the agreement on both sides of the issue. Some fear that consumers will still profit illegally by selling copies of CDs or pre-recorded DAT tapes they buy. Others fear that the compromise DAT technology will make the process of editing DAT tapes of live music too complicated and expensive.

In any case, consumers and Japanese manufacturers will probably be the big winners when machines and music tapes start to appear on the market during the next several years. DAT is expected to dominate portable and automobile stereo, because the vibration of movement and vehicle travel perturbs compact-disc machines. DAT is insensitive to such vibrations. The DAT tape is even smaller than today's analog audiocassettes. Also, DAT may prove useful and cheap for backing up of large amounts of computer data.

Some analysts claim that the erasable compact-disc will eventually prove superior to DAT; however, it is an open question as to whether erasable CDs will be able to be re-recorded as many times as the DAT cassette.

## **PART 15 MANUFACTURERS: BE CAREFUL IN AMATEUR BANDS**

FCC personnel in charge of technical standards had some interesting words for manufacturers at a recent industry seminar on §Part 15 in Washington. The ARRL and many amateurs fear wholesale incursion of nonlicensed consumer products into amateur bands as a result of the recently revised §Part 15 rules. Interference to §Part 15 devices from legally operating ham

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stations is a potentially serious problem, unless the devices are used in nonresidential settings, such as factories, where amateur stations are unlikely to be.

At the Telecommunications Industry Association §Part 15 Workshop, John Reed of the FCC's Technical Standards Branch said "The ARRL and others have come in and petitioned against the use of 902-928 MHz and higher bands by §Part 15. I will not begin to guarantee that there won't be cases of interference. There very likely could be. We think the [emission] limits are low enough that it will reduce the probability of interference occurring to the authorized [licensed] services."

"As far as interference to the §Part 15 device is concerned, this was not something we even really addressed when we opened up bands to §Part 15 operation. There was concern over whether we should even adopt 902-928 MHz because of the large and increasing number of high-power authorized services in that band."

"But we also recognize that in certain conditions, in certain areas, operation in that band is very feasible. That is not something we wanted to preclude -- saying that if everybody in the country can't use it, we won't let anybody use it. That's not the best way to use the spectrum. So we did open it up to any use it could be viable for. ...The ARRL filed a stay in this proceeding. They were turned down on the stay and immediately went to the courts who turned them down also. If we were to turn down the ARRL on reconsideration, they still have the option of having the courts come back and still stay or overturn the proceeding."

One manufacturer asked what would happen when millions of dollars worth of products receive interference from authorized stations such as amateur. Frank Rose of the FCC replied, "I think that sir, you have had prior notice that you are operating on a sufferance basis... You made a marketplace decision. If you succeed, then you reap the benefits of the success. If you fail, then you've taken your chances and lost. §Part 15 is still §Part 15. It's not an authorized service such as we have for services which are allocated. There are no allocations to §Part 15 devices. *No allocations*, and I stress that because I think there are misconceptions. ...If the §Part 15 device causes interference then it must shut down."

ARRL controller **Larry J. Shima, W0PAN**, is no longer with the League. He was terminated after the ARRL ended the year with a deficit of between \$500,000 and \$1 million. He will be replaced by a Chief Financial Officer who (with Dave Sumner, K1ZZ) will report directly to the ARRL Board. League advertising manager, **Bruce O. Williams, WA6IVC**, resigned in sympathy to the way that the Shima firing was handled. He was close to retirement anyway. Shima, an ex-Dakota Division ARRL Director, was considered the father of the VEC program. He made a motion in 1971 to study the feasibility of petitioning the commission to establish an FCC certified Volunteer Examiner program to administer amateur examinations to all persons residing more than 75 miles from a quarterly FCC examining point. Two Extra Class VE's were to administer all classes of examinations. (See July 1971 QST, Page 81.)

## \*PART 97 AMATEUR RULES \*NOVICE QUESTION POOL \*TECHNICIAN QUESTION POOL GENERAL QUESTION POOL ADVANCED QUESTION POOL EXTRA CLASS QUESTION POOL

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**W5YI - Box 565101 - Dallas, TX 75356**

We have reprinted the FCC *Report and Order* that contains the complete updated and reorganized **§Part 97 Amateur Radio Rules** - the revisions in the Rules have been highlighted. These new Rules go into effect Sept. 1. The **Novice** and **Technician** question pools have also been completely revised ...and *expanded by about 20%*. These new questions must be used by all VE's (both in the Novice testing program and the VEC System) after October. The above represents a special one time (no limit on quantity) deal. If you haven't got the new Rules - or if you conduct amateur classes - now is your chance to stock up. (Although not recently revised, the current General, Advanced and Extra Class question pools are also available.) *And we will pay the postage!*

## STANDARDIZING EUROPEAN CB

The British *Department for Trade and Industry* (DTI), which oversees personal radio communication in the United Kingdom, announced on July 3rd that it was now authorizing European Citizens Band radio enthusiasts to use the European "CEPT" CB band in the United Kingdom without a UK CB license. Parliamentary regulations permitting the new rules went into effect on July 1st.

CEPT, the *Conference of European Postal and Telecommunications Administrations*, sets standards for telecommunications equipment. CEPT recommendation T/R20-02, covering European technical specifications for a common CB service between 26.960-27.410 MHz was adopted by the 26 member CEPT countries in September 1986. The Recommendation seeks to establish a common CB service using standardized equipment and frequencies throughout Europe.

Most European countries have now established a CEPT CB service. Although the eventual aim is for the CB'ers home license to permit free operation throughout Europe, some countries have not yet made the necessary legal and administrative arrangements. The press release did not indicate the operating parameters of the CEPT band, but international communications are obviously very likely considering the propagation characteristics of 27 MHz.

The CEPT CB channels have only been in operation in the United Kingdom less than two years. CB sets used within the UK by European CBers will need to be marked by manufacturers to show that they have been approved in the user's own country for use on the CEPT channels.

The *Wireless Telegraphy Act of 1949* requires British CBers and amateurs to be licensed ...except where exempted. CEPT CBers are now exempted from the licensing requirement when operating on CEPT channels with approved CEPT equipment. It is interesting to note that the United Kingdom actually has two CB bands. The older (circa 1981) British CB band is located above the CEPT channels at 27.60125 MHz to 27.99125 MHz - almost sharing a common wall with the adjacent ten meter ham band. Licenses are still required when operating the older CB band. Members of CEPT include Austria, Belgium, Cyprus, Denmark, Spain, Finland, France, Germany (Fed. Rep.),

Greece, Irish Republic, Iceland, Italy, Liechtenstein, Luxembourg, Malta, Monaco, Norway, Netherlands, Portugal, San Marino, Sweden, Switzerland, Turkey, United Kingdom, Vatican City and Yugoslavia.

In another ruling, U.K. radio amateurs can now build or buy ten meter transmitters for their own use without special government authority ...providing they are not capable of operating in the CB band. British licensed amateurs also can now convert legal CB sets for use in the amateur ten meter band. Conversion of "non-approved" CB sets, however, requires "possession for conversion" authority from the DTI. The previous regulations were aimed at controlling the use of unauthorized equipment on the CB frequencies.

## International "Code Free" Ham Experience BRITAIN'S CLASS "B" AMATEUR LICENSE

Tony Smith, G4FAI, is a London, England, journalist who writes a monthly "Reporting Amateur Radio" column for the British magazine, *Everyday Electronics*. He also authors the "Morse Report" for "Amateur Radio" magazine.

The United Kingdom has had a code-free amateur license class for some twenty-five years. Great Britain does not, however, have an entry level Novice license class. I wrote Tony to learn more about their Class B code-free license class and how it has affected their Amateur Radio Service. The following is his unedited response. Keep in mind that Smith is a "Morse man" (as he calls it) and current chairman of the European CW Association.

## HISTORY

"Before 1964, all British amateurs were required to use CW on the amateur bands for one year before being allowed to use telephony. That year a new no-code license was introduced which allowed operation on frequencies 420 MHz and above. In 1968 the 2-meter band, 144-146 MHz [the U.K. does not allocate 146-148 MHz to their amateur service], was released to holders of the no-code license, and in 1986 50 MHz also became available. In the same year no-code licensees were allowed to send Morse code on-the-air as part of their preparation for the amateur Morse test if they wished to upgrade to a full all-bands license.

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## PRESENT LICENSE

Under present regulations there are just two general types of license in the UK (United Kingdom.) The "Class A", requires successful completion of the *Radio Amateurs Examination* (RAE), plus a 12 w.p.m. Morse sending and receiving test. This license gives access to all amateur bands with all approved modes.

The "Class B" license requires a pass in the same examination, but no Morse test, and licensees have access to all bands, except those below 30 MHz. When "B" licensees operate a station under the license and supervision of an "A" licensee this restriction does not apply. Class "B"ers can transfer to class "A" by taking and passing the Morse test.

## EXAMINATIONS

The RAE is set by an academic body, the *City and Guilds of London Institute* (CGLI) and the examinations are held at colleges and other centres twice yearly throughout the UK and overseas. The contents of the examination are supervised by an advisory group comprising members representing the CGLI, *Radio Society of Great Britain* (RSGB), *Department of Trade and Industry* (DTI), plus various professional and educational bodies. Since 1986, the Morse test has been administered by the RSGB throughout the UK on behalf of the DTI, the country's licensing body.

## NUMBERS

When the "B" license was first introduced, take-up was slow and by 1968 fewer than one thousand of the new licenses had been issued. In the following year, resulting from the availability of 2-meters, numbers increased by nearly 50% and by 1970 the annual increase in Class "B" licenses was greater than that of class "A". This trend has continued to the present day although many class "B"ers do go on to take the Morse test and transfer to class "A."

A big boost for amateur radio numbers was experienced as a result of the UK CB boom in the early 80's. Many of the new Cbers, experiencing radio communication for the first time were attracted by the wider opportunities offered by amateur radio and came into the hobby, mainly as class "B" licensees. Probably as a result of that boom, in 1984 the actual number of class "B" licenses in the UK exceeded the number of class "A" licenses. The latest figures (June 1989) show

a reversal of the trend with 31,905 class "A" and 26,819 class "B." According to the DTI, this is due to more class "B"ers now transferring to class "A."

## TAKEN FOR GRANTED

Whatever apprehension there was back in 1964 about issuing VHF licenses without Morse qualifications, most UK amateurs today take the system for granted although there remains a feeling in some circles that somehow class "B" is inferior to class "A."

Class "B" has resulted in VHF/UHF operation becoming a major part of the UK amateur radio scene with activities taking place over the whole spectrum. The RSGB has a Microwave Committee, a VHF Committee, a VHF Contest committee, and runs an annual VHF convention usually covering the more serious aspects of experimentation and operation.

While undoubtedly the greatest activity by class "B" operators is on channelised 2-meters f.m., most other modes are also used and data-comms is a popular growth area. [Data-comms is computer-to-computer packet radio.] There are currently well over 100 mailboxes in operation with new authorisations going through at the rate of about four a week. It should be remembered, however, that VHF/UHF is not the exclusive domain of class "B", and many class "A" operators use these bands as well.

## NEED TO RECRUIT

Most newcomers come into the hobby via the class "B" license, nearly always declaring their intention to "go on to take the Morse." Despite the current trend, many abandon this intention and remain on the higher frequencies. For some this is because Morse presents an insurmountable barrier, but others clearly find the specialisation of VHF and higher to their liking and have no wish to operate on the HF bands.

As in the United States, opinion is frequently expressed in the UK amateur press that the Morse code test is outmoded and serves no useful purpose. "If there was no Morse test at all," it is said, "plenty more young people would come into amateur radio." The purpose of this report is not to argue on this subject but suffice to say that in the UK there seems little likelihood at present of further liberalization of the existing no-code route

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into amateur radio.

Like the FCC, the DTI recognizes and abides by the stipulation in the *International Radio Regulations* requiring licensed amateurs operating below 30 MHz to prove a certain proficiency in sending and receiving Morse. No matter what people want, and how they argue, this situation is unlikely to change overnight!

## RSGB CONCERN

Undoubtedly, without the class "B" license, the UK amateur population would be much smaller than it is today, but this fact has done little to allay the anxiety of the RSGB about the future of amateur radio.

Despite the availability of a no-code entry in Britain, the Society shares the concern of the ARRL and others about the failure of amateur radio to attract bright young newcomers (it has less than 200 members under the age of 18.) It too attaches great importance to recruiting many more amateurs as the greatest safeguard for the future.

The RSGB's answer under Project YEAR (*Youth into Electronics via Amateur Radio*) is to promote the idea of a new Novice license with an easier entrance examination - and a 5 wpm Morse test! This would be a low-cost entry to the hobby involving home-construction of QRP equipment from approved kits. Operation is suggested on designated hf, VHF and UHF bands, mainly on CW, but possibly with other modes. More on this later when firm proposals are put to the DTI." (Signed: Tony Smith, G4FAI, 1 Tash Place, New Southgate, London N11 1PA, England.)

Tony also sent along a DTI (British government) press release (dated: July 20, 1989) entitled:

## **Robert Atkins Calls for More Recruitment of Communication Engineers.** - It reads in part:

Industry Minister Robert Atkins today told an audience of communications industry specialists that they "...must recruit and train young people if Britain's spectacular expansion of communications is to be maintained." Mr. Atkins was giving the opening address at the *Radio Society of Great Britain* (RSGB) special conference in London on its training initiative - Project YEAR, *Youth into Electronics via Amateur Radio*. "New telecommunication services are being licensed by the govern-

ment to meet increasingly sophisticated communication needs. Mobile cellular radio has seen non-stop growth in demand. Telepoint [CT2 - new cordless telephony] is coming."

"I would like to see industry help encourage young people into a communications career through the RSGB by supporting its request for help with training resources. Government," he continued, "is contributing through DTI's Enterprise and Education Initiative and through our support for Amateur Radio. Young people with amateur radio skills make a valuable contribution to our national skills base with their technical knowledge and hands-on experience. To encourage them we have supported again the Young Amateur of the Year award for the most outstanding achievement by a young person under 18. Project YEAR is an initiative launched last year by HRH The Duke of Edinburgh and aims to bring young people into amateur radio."

## NO-CODE INTERNATIONAL EXPERIENCE

To obtain information for their Code-free Study Committee, the American Radio Relay League contacted many member societies of the International Amateur Radio Union to learn of their experiences with a code-free license. The responses include:

**SWEDEN** introduced a code-free license in 1970. Thirty-five percent (or 3,750) of their 120,739 licensed amateurs hold their T-license. About 50% of new amateurs enter amateur radio via the code-free licensing route ..95% renew. *Gunnar Eriksson, SM4GL*, feels Sweden should have limited the license to a term of 3 or 5 years to encourage upgrading. "Most of the 'would-be-amateurs' consider code is outmoded and do not like to learn it because it sounds difficult without trying to learn it! Otherwise we have mostly positive experience of those T-licensees because they have helped in the way to build up a good deal of the repeaters on 2m and 70cm. But 'T' means a technical license and many of them are not technical enough because the examination is too easy."

*Tony Bugeja, 9H1FM*, of the **MALTA** Amateur Radio Club reported 150 of their 300 amateurs hold a code free ham ticket. Ninety percent of all of their amateurs enter ham radio in that manner. "Practically all code-free renew. They tend to be very enthusiastic and therefore participate" in

IARU activities. There is no difference in the technical examination material between the code-free and the full ticket. Code-free privileges include full power levels (400 watts PEP) on any frequency upwards of 144 MHz. "Code free entry is an easy way to familiarize [one] with ham radio. As most proceed to the full ticket, [experience] is positive."

The **FEDERAL REPUBLIC OF GERMANY** introduced a Class "C" code-free class of amateur license in 1967. 24,428 out of 58,144 amateurs hold that class ...a lifetime license. About thirty percent enter amateur radio via the code-free route and forty-five per cent of these eventually pass the code to upgrade further. The Class "C" technical questionnaire is the same as the Class "B" (full) license except that a pass mark of only 50% (versus 75% for the "B") is required. Candidates who do not achieve 75% must take the written exam again along with the code to upgrade to full amateur status.

**AUSTRIA** introduced their code-free amateur license in 1964 and seventy percent of their 5400 amateurs hold that license. Most eventually upgrade to full amateur status. The code-free written examination is exactly the same as for the full license except for the Morse test. Code-free licensees are allowed to operate CW on 2m and 70cm for training purposes.

According to *Herwig Cuypers, ON8MC*, 2500 of **BELGIUM's** 4000 amateurs hold a code-free ticket. Ninety-five percent of Belgium's new amateurs obtain their first ticket in this manner. About half eventually pass the code to upgrade. The technical examination requirements for the code-free license is exactly the same as for the "full privilege" license. Code-free privileges carry the same power levels, and (except for CW) modes and emissions as the full ticket on all frequencies above 30 MHz. Herwig says their code-free experience has been "...very positive. We have now a lot of so-called VHF/UHF/SHF amateurs (OSCAR-13, VHF-DXing, etc.) In response to the question about doing things differently, Herwig, said Belgium "...would do exactly the same."

*Irwin Provence, P43IDP*, of the **ARUBA** Amateur Radio Club said eight of Aruba's 54 amateurs hold no-code amateur licenses. Their licenses are issued as being valid "until further notice." The difficulty on the technical material for the code-free licensee is the same as for the full

privilege ticket. Code-free licensees must pass 13 wpm code to upgrade to full privilege status. Code-free privileges are 50 MHz and above with a maximum transmitter power of 150 watts. Permission is granted to practice CW on 2 meters. There are three classes of amateur licenses in Aruba and the Neth. Antilles: License A, B and C. If you pass the law and technical examination, but fail the code, you automatically qualify for the "C" (code-free) license. All in all, Provence said he thinks the system works fine and he would not change it.

R. G. Henderson of the *Wireless Institute of AUSTRALIA* says they are pleased with their no-code system. "We are aiming for (a) four class license system... no-code Novice (VHF only), Novice, No-Code Full license (VHF/UHF) and a full license. Twenty-five percent of Australia's 17,936 licensees (December 1988) hold a code-free ticket. Ninety-five percent eventually upgrade to obtain greater operating privileges. Henderson says the volunteer involvement by the code-free licensees is "Equal to or better than full licensees." The no-code written examination is identical to the full license. Privileges: All frequencies allocated above 50 MHz ...same transmitter power and emission modes as the full licensee.

**CANADA** responded by reporting less than 1% of their 3,703 licensees hold the code-free Digital license. Very few Canadian amateurs obtain the Digital license as their first amateur license. "A large number of holders of the Digital license already hold amateur licenses. The examination is very difficult and consists of a multiple choice test on the amateur regulations, an essay type test on electronic theory at the Advanced amateur level and an essay type test on digital communication theory.

*Paul Johnson, ZS1BR*, of the **SOUTH AFRICA** Radio League reports that 1164 (25.3%) of their 4596 amateurs (1988 figures) hold the "ZR" (versus a ZS prefix) code-free license. "83.7% obtained a code-free license as their first amateur license ...and 23% of these licensees eventually pass a Morse examination to obtain greater operating privileges." There is "no difference" between the written examination [administered] to no-code and full amateur licensees. "No [code-free] operation is allowed below 50 MHz. [No-code licensees have] exactly the same conditions, power, modes, etc., as the full privileged license above 50 MHz."